WHAT IS CLAIMED IS:

1. An implantable port comprising

a base having a passage for receiving an access tube;

a valve assembly in the base, said valve assembly having a bore which receives the access tube and wherein the valve assembly opens in response to movement of the access tube;

a valve lock having a latch which shifts position to lock the valve assembly open in response to movement of the access tube.

2. An implantable port as in claim 1, wherein the valve assembly opens in response to motion of a needle.

3. An implantable port as in claim 1, wherein the latch comprises at least one space-filling element which is displaced from the passage into a receptacle adjacent to the passage as the access tube is inserted into the passage, wherein space-filling element remains in the receptacle to lock the valve open so long as the access tube remains in the bore.

4. An implantable port as in claim 3, wherein the valve assembly comprises a plunger and wherein a pair of space-filling elements is displaced both downwardly, to lower the plunger to open the valve, and outwardly into the receptacle, to lock the plunger open.

5. An implantable port as in claim 3, wherein the valve lock comprises a pair of balls which are displaced laterally.

6. An implantable port as in claim 1, wherein the valve is selected from the group of pinch valves, sliding valves, slit valves, duckbill valves, and leaflet valves.

7. An implantable port as in claim 1, wherein the bore comprises a tapered bore which seals against the access tube as said tube is inserted therein.

8. A method for percutaneously accessing a body lumen, said method comprising:

maintaining a conduit between an implanted access port and the body lumen, said conduit being opened and closed by a valve within the port; and

percutaneously inserting an access tube into an implanted access port, wherein inserting the access tube opens the valve and displaces at least one space-filling element into a receptacle to lock the valve open until the access tube is removed.

9. A method as in claim 8, wherein the space filling element is a ball.

10. A method as in claim 8, ~~wherein~~ inserting the access tube laterally displaces at least two opposed balls into the receptacle so that the tube holds the balls in place until the tube is removed.

11. A method as in claim 8, wherein the bore comprises a tapered bore which seals against the access tube as said tube is inserted therein.